AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (withdrawn): A method of producing a high concentration polymer solution, comprising steps of:

dissolving a polymer into a solvent to prepare a low concentration polymer solution; and

continuously concentrating said low concentration polymer solution to obtain said high concentration polymer solution.

2. (withdrawn): A method as described in claim 1, further comprising a step of filtrating said low concentration polymer solution or said high concentration polymer solution in order to remove solid-state matters of said polymer.

3. (withdrawn): A method as described in claim 1, wherein part of said solvent that is separated in concentrating said low concentration polymer solution is reused for dissolving said polymer.

4. (withdrawn): A method as described in claim 3, wherein the polymer concentration of said high concentration polymer solution is from 1 wt.% to 20 wt.% higher than that of said low concentration polymer solution, and the fluctuation of the concentration of said high concentration polymer solution is preserved in a range of a certain targeted value ± 5 wt.%.

5. (withdrawn): A method as described in claim 3, wherein when C_H is determined as a predetermined value of the polymer concentration of said high concentration polymer solution, and C_L is the polymer concentration of said low concentration polymer solution, then the fluctuation of the polymer concentration of said high concentration polymer solution is preserved in a range of $\pm(C_H-C_L)\times 10$ wt.% from the predetermined value C_H.

6. (previously presented): A method of producing a high concentration polymer solution, comprising the steps of:

dissolving a polymer into a solvent to prepare a low concentration polymer solution; and

continuously concentrating said low concentration polymer solution to obtain said high concentration polymer solution,

said concentrating step comprising the steps of:

continuously feeding said low concentration polymer solution to a concentrating tank;

evaporating part of said solvent of said low concentration polymer solution as a solvent gas in said concentrating tank;

condensing said solvent gas to recover as a condensed solvent; and

continuously drawing out from said concentrating tank said high concentration polymer solution obtained during concentrating in said concentrating tank;

said method further comprising the steps of:

measuring the polymer concentration of said high concentration polymer solution drawn out from said concentrating tank; and

controlling at least one of volume of said low concentration polymer solution for feeding into said concentrating tank, temperature of said low concentration polymer solution for concentrating, and recovering volume of said condensed solvent, so as to adjust the polymer concentration of said high concentration polymer solution.

7. (canceled).

8. (previously presented): A method as described in claim 6, further comprising steps of:

measuring a level of said low concentration polymer solution in said concentrating tank;

controlling at least one of volume of said low concentration polymer solution for feeding said concentrating tank, temperature of said low concentration polymer solution for concentrating, and recovery volume of said condensed solvent, so as to keep the level constant.

9. (previously presented): A method as described in claim 6, further comprising steps of:

measuring recovery volume of said condensed solvent; and

controlling at least one of temperature of said low concentration polymer solution for concentrating, volume of said low concentration polymer solution for feeding into said concentrating tank, and temperature for condensing said solvent gas, so as to keep said recovery volume of said condensed solvent constant.

10. (previously presented): A method as described in claim 6, wherein said concentrating tank including:

a tank main body for temporarily storing said low concentration polymer solution while said low concentration polymer solution is concentrated;

a roof disposed on said tank main body, an inner surface of said roof forming a condensation surface for condensing said solvent gas and recovering said condensed solvent;

at least one flash nozzle inserted into said tank main body, said flash nozzle being positioned under a solution surface of said low concentration polymer solution in said tank main body while said low concentration polymer solution is concentrated, said flash nozzle discharging fresh low concentration polymer solution which is supplied into said tank main body; and

a drain pipe which opens on a bottom of said tank main body, for draining said high concentration polymer solution.

11. (previously presented): A method as described in claim 10, wherein an end of said flash nozzle is bent to said bottom of said tank main body to form an L-shape, and said roof has a circular cone shape.

12. (original): A method as described in claim 10, wherein

a condensation temperature of said condensation surface is preserved in a range of a predetermined condensation temperature value $\pm 10\ °C$;

a flash temperature is preserved in a range of $\pm 10\ °C$ from a predetermined temperature, said flash temperature is a temperature of said fresh low concentration polymer solution to be discharged from said flash nozzle;

a flash pressure is preserved in a range of a predetermined flash pressure value ± 0.05 MPa, said flash pressure is a pressure of said fresh low concentration polymer solution to be discharged from said flash nozzle; and

a drainage value of draining said high concentration polymer solution through said drain pipe is preserved in a range of a predetermined drainage value ± 10 %.

13. (original): A method as described in claim 12, wherein said flash temperature is at least boiling point of said solvent at the atmospheric pressure, and said flash pressure is 0.1 MPa higher than a vapor pressure of said solvent at said flash temperature.

14. (original): A method as described in claim 13, wherein an inside diameter of said flash nozzle is at most 10 cm.

15. (original): A method as described in claim 13, wherein said inner pressure of said concentrating tank is maximum of 1.5 MPa.

16. (original): A method as described in claim 15, wherein a temperature of said condensation surface is at least $2\ °C$ lower than a boiling point of said solvent at atmospheric pressure, and a temperature distribution of said condensation surface is maximum of $20\ °C$.

17. (original): A method as described in claim 16, wherein overall heat transfer coefficient of said condensation surface is minimum of 50 $W/(m^2 \cdot K)$.

18. (original): A method as described in claim 17, wherein a heating means including a heating surface for heating said low concentration polymer solution is provided upstream from said concentrating tank, and the overall heat transfer coefficient of said heating surface is minimum of 50 $W/(m^2 \cdot K)$.

19. (original): A method as described in claim 18, wherein a passage of said low concentration polymer solution between said heating means and said concentrating tank is formed of at least one of nickel alloy, stainless alloy, and titanium alloy.

20. (previously presented): A method as described in claim 10, wherein when S1 is determined as an area of said solution surface of said low concentration polymer solution in said concentrating tank, and S2 is a area S2 of said condensation surface, then a ratio (S1/S2) satisfies a relation of:

$$0.01 \leq (S1/S2) \leq 5.$$

21. (original): A method as described in claim 10, wherein a pressure in an entrance side of a drain pipe for drawing said high concentration polymer solution is minimum of 1000 Pa.

22. (original): A method as described in claim 10, wherein said condensed solvent is drained from said concentrating tank in effect of gravity or surface tension or with a liquid transporting means.

23. (previously presented): A method as described in claim 10, wherein a production step of said low concentration polymer solution comprises sub-steps of:

stirring said low concentration polymer solution;

increasing a pressure of said low concentration polymer solution; and

heating said low concentration polymer solution.

24. (previously presented): A method as described in claim 23, wherein the production step of said low concentration polymer solution is performed plural times, and when temperature and pressure reach respective predetermined values, then said low concentration polymer solution is fed toward said concentrating tank.

25. (original): A method as described in claim 10, wherein said solvent contains at least one of dichloromethane, methyl acetate, methyl formate, acetone, cyclopentanone, cyclohexanone and dioxolane.

26. (original): A method as described in claim 10, wherein parts in a production line for contacting said condensed solvent or said low concentration polymer solution have surface roughness Ra of maximum of 10 μm.

27. (original): A method as described in claim 26, wherein said production line includes plural concentrating tank.

28. (original): A method as described in claim 11, wherein said roof is inclined such that a contact angle of said condensed solvent on said condensation surface may be less than 60°.

29. (original): A method as described in claim 25, wherein said polymer contains at least one of cellulose acylate, polycarbonate, aramid based polymers, polysulfone and cycloolefin based polymers.

30. (previously presented): A method as described in claim 29, wherein said polymer is cellulose acylate.

31. (currently amended): A method as described in claim 30, wherein, when acetyl value of 6^{th} hydroxide groups is represented as A, and the acetyl value of 2^{nd} and 3^{rd} hydroxide groups are represented as B, then said cellulose acylate satisfies following two formulae:

$2.5 \le A+B \le 3.0$ ·····(1)

$0.7 \le A \le 1.0$ ·····(2),

wherein the 2^{nd}, 3^{rd}, and 6^{th} hydroxide groups mean the hydroxide groups at the 2^{nd}, 3^{rd}, and 6^{th} positions in glucose.

32. (withdrawn): A method as described in claim 30, wherein said high concentration polymer solution is cast on a substrate to form a polymer film.

33. (withdrawn): A method as described in claim 32, wherein said high concentration polymer solution is cast in a co-casting method to form at least one layer of said polymer film.

34. (withdrawn): A method as described in claim 32, wherein said high concentration polymer solution is cast in a sequentially casting method to form at least one layer of said polymer film.

35. (withdrawn): A method as described in claim 32, wherein a number of a light point defect having a size of minimum of 20 μm is observed maximum of 200 in an area of 1 cm^2 of said polymer film sandwiched between cross-nicol polarized films.

36. (withdrawn): A method as described in claim 32, wherein said polymer film is used as a protective film for a polarizing filter.

37. (withdrawn): A method as described in claim 32, wherein said polymer film is used for optical function film.